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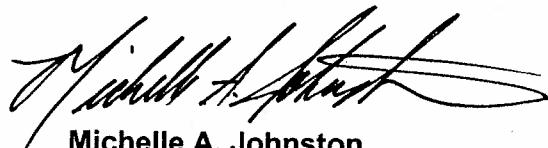
ANALYTICAL REPORT

Perfluorocarbon (PFC) Analysis

Lot #: D9J230362

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January 12, 2010

Case Narrative D9J230362

TestAmerica Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes are provided on each datasheet to assist in the interpretation of the results.

The results relate only to the samples in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have found to be compliant with laboratory protocols with any exceptions noted below.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL) and should be considered ND at the MDL. Unless otherwise noted, results for solids have been dry weight corrected.

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Sample Arrival and Receipt

The following report contains the analytical results for seven water samples received at TestAmerica Denver on October 23, 2009, according to documented sample acceptance procedures. The samples were received in good condition at temperatures of 5.9°C, 5.7°C, and 4.8°C.

Samples AB-13, AB-5, AB-1, and AA2 were cancelled in accordance with the client's instructions given on October 26, 2009.

No other anomalies were encountered during sample receipt.

Standards

Analytical standards were prepared using commercially available certified solutions containing all compounds of interest.

The mass labeled compounds 13C4 PFBA, 13C2 PFHxA, 18O2 PFHxS, 13C4 PFOA, 13C4 PFOS, 13C5 PFNA, 13C2 PFDA, 13C2 PFUnA, 13C2 PFDoA, and D3 MeFOSA were introduced at the extraction step and were used for internal standards for the quantitation of the target compounds.

Sample Extraction and Analysis

The samples presented in this report were extracted for the target analytes by TestAmerica Denver's Standard Operating Procedure (SOP) DV-OP-0019 and analyzed for the target analytes by TestAmerica Denver's SOP DV-LC-0012.

Method QC Samples

The Method Blank is processed reagent water spiked with internal standard and prepared with each batch of 20 samples of the same matrix. The method blanks were non-detect at the reporting limits for the target analytes.

Each batch is prepared with low and mid level Laboratory Control Samples (LCS). The LCS recoveries for both levels were within established control limits, with the exception of the items noted in section Analytical Comments.

Analytical Comments

The Standard Operating Procedure (SOP) was altered slightly in the sample preparation for FOSA. Sodium hydroxide was added to samples MW 9-M3, R1 BROWNS BRIDGE, R2 TILTON BRIDGE, R3 FOX BRIDGE, and R4 CONFLUENT to obtain a pH of 14 instead of the SOP required <2. The basic pH and Strata-XL cartridge are generating better internal standard recoveries for MeFOSA.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high concentrations of target analytes, samples MW 21-D2, MW 24-D1, and R4 CONFLUENT had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilutions required.

Please note the PFCs listed below for samples MW 21-D2 and MW 24-D1 were reported from the injections on November 10, 2009,

13C5 PFNA
13C2 PFDA
13C2 PFUnA
13C2 PFDaA
Perfluorononanoic acid (PFNA)
Perfluorodecanoic acid (PFDA)
Perfluorododecanoic acid (PFDaA)
Perfluorotridecanoic acid (PFTriA)
Perfluorotetradecanoic acid (PFTeA)

All of the other PFCs for these two samples were reported from the injections on November 11, 2009.

Please note the PFCs listed below for samples MW 9-M3, R1 BROWNS BRIDGE, R2 TILTON BRIDGE, R3 FOX BRIDGE, and R4 CONFLUENT were reported from the injections on November 11, 2009,

18O2 PFHxS
13C4 PFOS
Perfluorobutane sulfonate (PFBS)
Perfluorohexane sulfonate (PFHxS)
Perfluorooctane sulfonate (PFOS)
Perfluorodecane sulfonate (PFDS)

All of the other PFCs for these two samples were reported from the injections on November 8, 2009.

Due to low internal standard recoveries in the samples and/or high LCS/LCSD recoveries in PFC batch 9299508, all seven samples were re-extracted out of the laboratory prescribed hold time and reanalyzed in QC batch 9321493. Due to low internal standard recoveries in the samples and/or high LCS/LCSD recoveries in FOSA batch 9301197, samples R2 TILTON BRIDGE and R4 CONFLUENT were re-extracted out of the laboratory prescribed hold time and reanalyzed in QC batch 9316449. All four batches are included in this report. There is no prescribed regulatory holding time requirement for PFCs. The scientific literature indicates PFCs are highly persistent compounds in the environment. TestAmerica Denver has conducted stability studies indicating medium- and low-level standard solutions of PFOA are stable for at least three months in glass, polystyrene, and polypropylene plastics at 4+2 °C. The 7-day/40-day and 14-day/40-day holding times listed above are based on the general EPA

convention for the holding time of extractable organic compounds in water and soil. Please note the sample results should be considered estimated.

The internal standard recoveries for 13C2 PFDA, 13C5 PFNA, 13C2 PFUnA, and/or 13C2 PFDoA associated with QC batch 9299508 were recovered below 50% in samples MW 9-M3, R1 BROWNS BRIDGE, R2 TILTON BRIDGE, and R3 FOX BRIDGE. Upon re-extraction and reanalysis in QC batch 9321493, internal standard recovery outliers were still present in samples MW 9-M3, R1 BROWNS BRIDGE, and R3 FOX BRIDGE, demonstrating that these anomalies are most likely due to matrix interference. Upon re-extraction and reanalysis in QC batch 9321493, internal standard recoveries were 100% in control in sample R2 TILTON BRIDGE. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The internal standard recovery for MeFOSA associated with QC batch 9300254 was recovered below 50% in sample MW 9-M3. The internal standard recovery of MeFOSA was recovered within the laboratory's historical limits of 37-130%, therefore, corrective action was deemed unnecessary.

The mid-level LCS/LCSD associated with QC batch 9299508 exhibited percent recoveries above the QC control limits for Perfluorooctanesulfonate (PFOS). The low-level CS associated with QC batch 9299508 exhibited a percent recovery above the QC control limits for Perfluorohexanoic acid (PFHxA). These are indicators that data may be biased high. Upon re-extraction and reanalysis in QC batch 9321493, percent recoveries were 100% in control except for Perfluorotetradecanoic acid (PFTeA). Both sets of data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

Due to a limitation in the LIMS system, the low-level LCS associated with QC batch 9321493 reported the percent recoveries for several PFCs as 0.0%. These compounds were recovered within the control limits, as outlined below.

Compound	Low-Level LCS Actual Recovery	Control Limits	Low-Level LCS Actual Result	MDL
PFDA	71%	64-146%	0.01424 ug/L	0.00782 ug/L
PFTriA	44%	44-164%	0.00881 ug/L	0.01772 ug/L
PFDS	40%	37-130%	0.00796 ug/L	0.00915 ug/L

As the compounds were detected below the Method Detection Limits (MDL), the system reports the percent recoveries as 0.0%. Please note PFDS is a non-target compound for this project.

The low-level LCS and mid-level LCS/LCSD associated with QC batch 9301197 exhibited percent recoveries and/or an internal standard recovery outside the control limits for Perfluorooctane sulfonamide (FOSA) and MeFOSA. Upon re-extraction and reanalysis in QC batch 9316449, the percent recoveries and internal standard recoveries were 100% in control. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The method required MS/MSD could not be performed for QC batches 9299508, 9299517, 9300254, 9301197, 9316449, and 9321493, due to insufficient sample volume. Method

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precision and accuracy have been verified by the acceptable low-level LCS and mid-level LCS/LCSD analyses data.

The ending Continuing Calibration Verification (CCV) standard associated with samples in QC batch 9299508 exhibited a %D value out of range, biased high, for Perfluorotridecanoic acid (PFTriA). This is an indicator that data may be biased high. As no detectable concentrations of PFTriA are present in the associated samples, corrective action is deemed unnecessary.

The Standard Operating Procedure (SOP) was altered slightly for these samples in the sample prep and LC conditions. The alterations are listed below.

Solvents are now the same as they were in the original SOP and run per the following gradient: From 0 to 11 minutes, the flow rate is 0.4 mL/minute and the MeOH ramps up from 25% to 100%. From 11 to 11.01 minutes, the flow rate increases to 0.7 mL/minute and this flow is diverted from the MS. At 13 minutes the flow rate decreases back down to 0.4 mL/minute and 25% MeOH. The column then equilibrates to 14 minutes.

PFTriA and PFTeA now use 13C2 PFUnA as their internal standard instead of 13C2 PFDoA.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

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PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW 21-D2 10/19/09 15:20 001				
Perfluorooctanoic Acid	0.50	0.20	ug/L	DEN -LC-0012
Perfluorooctanesulfonate	1.0	0.20	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.16 J	0.20	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.38	0.30	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.26	0.20	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.21	0.20	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.082 J	0.20	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.36	0.20	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.085 J	0.30	ug/L	DEN -LC-0012
Perfluorooctanoic Acid	0.56	0.20	ug/L	DEN -LC-0012
Perfluorooctanesulfonate	1.0	0.20	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.16 J	0.20	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.39	0.30	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.28	0.20	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.20	0.20	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.44	0.20	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.10 J	0.30	ug/L	DEN -LC-0012
Perfluorooctane sulfonamide (F)	0.10	0.050	ug/L	DEN -LC-0012
MW 24-D1 10/19/09 16:00 002				
Perfluorooctanoic Acid	2.1	0.20	ug/L	DEN -LC-0012
Perfluorooctanesulfonate	2.1	0.20	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.44	0.20	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	1.3	0.30	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	1.1	0.20	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.97	0.20	ug/L	DEN -LC-0012
Perfluorononanoic acid (PFNA)	0.23	0.20	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.12 J	0.20	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	2.3	0.20	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.49	0.30	ug/L	DEN -LC-0012
Perfluorooctanoic Acid	2.2	0.20	ug/L	DEN -LC-0012
Perfluorooctanesulfonate	2.5	0.20	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.46	0.20	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	1.4	0.30	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	1.1	0.20	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.85	0.20	ug/L	DEN -LC-0012
Perfluorononanoic acid (PFNA)	0.22	0.20	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.10 J	0.20	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	2.5	0.20	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.48	0.30	ug/L	DEN -LC-0012
Perfluorooctane sulfonamide (F)	0.018 J	0.050	ug/L	DEN -LC-0012

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EXECUTIVE SUMMARY - Detection Highlights

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PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW 9-M3 10/20/09 08:52 003				
Perfluorobutanoic acid (PFBA)	0.053	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.076	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.048	0.020	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.042	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.12	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.041	0.020	ug/L	DEN -LC-0012
R1 BROWNS BRIDGE 10/22/09 09:52 004				
Perfluorohexanoic acid (PFHxA)	0.0032 J	0.020	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.0085 J	0.020	ug/L	DEN -LC-0012
R2 TILTON BRIDGE 10/22/09 09:03 005				
Perfluoroctanoic Acid	0.15	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.39	0.020	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.066	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.12	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.11	0.020	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.073	0.020	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.031	0.020	ug/L	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	0.0082 J	0.020	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.26	0.020	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.032	0.030	ug/L	DEN -LC-0012
Perfluoroctanoic Acid	0.17	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.33	0.020	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.057	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.15	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.091	0.020	ug/L	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	0.055	0.020	ug/L	DEN -LC-0012
Perfluorononanoic acid (PFNA)	0.027	0.020	ug/L	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	0.032	0.020	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.28	0.020	ug/L	DEN -LC-0012
Perfluorohexane sulfonate (PFH)	0.029 J	0.030	ug/L	DEN -LC-0012
Perfluoroctane sulfonamide (F)	0.043 J	0.050	ug/L	DEN -LC-0012
Perfluoroctane sulfonamide (F)	0.037 J	0.050	ug/L	DEN -LC-0012
R3 FOX BRIDGE 10/22/09 09:35 006				
Perfluoroctanoic Acid	0.022	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.024	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.022 J	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.022	0.020	ug/L	DEN -LC-0012

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EXECUTIVE SUMMARY - Detection Highlights

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PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
R3 FOX BRIDGE 10/22/09 09:35 006				
Perfluoroctanoic Acid	0.028	0.020	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.018 J	0.020	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.033	0.030	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.021	0.020	ug/L	DEN -LC-0012
R4 CONFLUENT 10/22/09 10:44 007				
Perfluoroctanoic Acid	0.36	0.20	ug/L	DEN -LC-0012
Perfluoroctanesulfonate	0.73	0.20	ug/L	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	0.13 J	0.20	ug/L	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	0.30	0.30	ug/L	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	0.19 J	0.20	ug/L	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	0.72	0.20	ug/L	DEN -LC-0012
Perfluoroctane sulfonamide (F)	0.092	0.050	ug/L	DEN -LC-0012
Perfluoroctane sulfonamide (F)	0.077	0.050	ug/L	DEN -LC-0012

METHODS SUMMARY

D9J230362

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
LC/MS/MS PFCs	DEN -LC-0012	SW846 FOSA spec

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

METHOD / ANALYST SUMMARY

D9J230362

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
DEN -LC-0012	Andria Lenoble	000800
DEN -LC-0012	Jacqueline Bonnett	003601
DEN -LC-0012	Teresa L. Williams	002510

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

SAMPLE SUMMARY

D9J230362

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LM79W	001	MW 21-D2	10/19/09	15:20
LM790	002	MW 24-D1	10/19/09	16:00
LM792	003	MW 9-M3	10/20/09	08:52
LM793	004	R1 BROWNS BRIDGE	10/22/09	09:52
LM797	005	R2 TILTON BRIDGE	10/22/09	09:03
LM799	006	R3 FOX BRIDGE	10/22/09	09:35
LM8AE	007	R4 CONFLUENT	10/22/09	10:44

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Dalton Utilities

Client Sample ID: MW 21-D2

HPLC

Lot-Sample #....: D9J230362-001 Work Order #....: LM79W1AA Matrix.....: WATER
 Date Sampled....: 10/19/09 15:20 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/12/09
 Prep Batch #....: 9299508 Analysis Time...: 04:50
 Dilution Factor: 10

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	0.50	0.20	ug/L	0.098
Perfluorooctanesulfonate	1.0	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	0.16 J	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	0.38	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	0.26	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	0.21	0.20	ug/L	0.13
Perfluorononanoic acid (PFNA)	ND	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	0.082 J	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUn A)	ND	0.20	ug/L	0.069
Perfluorododecanoic acid (PFDo A)	ND	0.20	ug/L	0.15
Perfluorotridecanoic acid (PFT ria)	ND	0.20	ug/L	0.18
Perfluorotetradecanoic acid (P FTeA)	ND	0.20	ug/L	0.15
Perfluorobutane sulfonate (PFS S)	0.36	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFH xS)	0.085 J	0.30	ug/L	0.070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY</u>
		<u>LIMITS</u>
13C4 PFOA	125	(50 - 200)
13C4 PFOS	106	(50 - 200)
13C4 PFBA	110	(50 - 200)
13C2 PFHxA	121	(50 - 200)
18O2 PFHxS	122	(50 - 200)
13C5 PFNA	140	(50 - 200)
13C2 PFDA	106	(50 - 200)
13C2 PFUnA	101	(50 - 200)
13C2 PFDoA	106	(50 - 200)

NOTE(S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: MW 21-D2

HPLC

Lot-Sample #....: D9J230362-001 Work Order #....: LM79W1AC Matrix.....: WATER
Date Sampled....: 10/19/09 15:20 Date Received...: 10/23/09
Prep Date.....: 10/26/09 Analysis Date...: 11/06/09
Prep Batch #....: 9299517 Analysis Time...: 23:24
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING	LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.10		0.050	ug/L	0.0057

SURROGATE	PERCENT	RECOVERY	LIMITS
MeFOSA	56		(50 - 200)

Dalton Utilities

Client Sample ID: MW 21-D2

HPLC

Lot-Sample #....: D9J230362-001 Work Order #....: LM79W2AA Matrix.....: WATER
 Date Sampled...: 10/19/09 15:20 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #....: 9321493 Analysis Time...: 06:14
 Dilution Factor: 10

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	0.56	0.20	ug/L	0.098
Perfluorooctanesulfonate	1.0	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	0.16 J	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	0.39	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	0.28	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	0.20	0.20	ug/L	0.13
)				
Perfluorononanoic acid (PFNA)	ND	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	ND	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUnA)	ND	0.20	ug/L	0.069
Perfluorododecanoic acid (PFDoA)	ND	0.20	ug/L	0.15
Perfluorotridecanoic acid (PFTriA)	ND	0.20	ug/L	0.18
Perfluorobutane sulfonate (PFB-S)	0.44	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFHxS)	0.10 J	0.30	ug/L	0.070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	81	(50 - 200)
13C4 PFOS	80	(50 - 200)
13C4 PFBA	91	(50 - 200)
13C2 PFHxA	84	(50 - 200)
18O2 PFHxS	78	(50 - 200)
13C5 PFNA	81	(50 - 200)
13C2 PFDA	77	(50 - 200)
13C2 PFUnA	76	(50 - 200)
13C2 PFDoA	75	(50 - 200)

NOTE (S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: MW 21-D2

HPLC

Lot-Sample #....: D9J230362-001 Work Order #....: LM79W3AA Matrix.....: WATER
Date Sampled....: 10/19/09 15:20 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 02:27
Dilution Factor: 10

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.20	ug/L	0.15

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	(50 - 200)
13C2 PFUnA	117		

Dalton Utilities

Client Sample ID: MW 24-D1

HPLC

Lot-Sample #....: D9J230362-002 Work Order #....: LM7901AA Matrix.....: WATER
 Date Sampled....: 10/19/09 16:00 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/12/09
 Prep Batch #....: 9299508 Analysis Time...: 05:01
 Dilution Factor: 10

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	2.1	0.20	ug/L	0.098
Perfluorooctanesulfonate	2.1	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	0.44	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	1.3	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	1.1	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	0.97	0.20	ug/L	0.13
)				
Perfluorononanoic acid (PFNA)	0.23	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	0.12 J	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUnA)	ND	0.20	ug/L	0.069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.20	ug/L	0.15
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.20	ug/L	0.18
Perfluorotetradecanoic acid (PFTeA)	ND	0.20	ug/L	0.15
Perfluorobutane sulfonate (PFBs)	2.3	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFHxs)	0.49	0.30	ug/L	0.070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	124	(50 - 200)
13C4 PFOS	107	(50 - 200)
13C4 PFBA	112	(50 - 200)
13C2 PFHxA	119	(50 - 200)
18O2 PFHxS	118	(50 - 200)
13C5 PFNA	116	(50 - 200)
13C2 PFDA	144	(50 - 200)
13C2 PFUnA	139	(50 - 200)
13C2 PFDoA	144	(50 - 200)

NOTE (S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: MW 24-D1

HPLC

Lot-Sample #....: D9J230362-002 Work Order #....: LM7901AC Matrix.....: WATER
Date Sampled....: 10/19/09 16:00 Date Received...: 10/23/09
Prep Date.....: 10/26/09 Analysis Date...: 11/06/09
Prep Batch #....: 9299517 Analysis Time...: 23:29
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.018 J	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
MeFOSA	67	(50	- 200)

NOTE (S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: MW 24-D1

HPLC

Lot-Sample #....: D9J230362-002 Work Order #....: LM7902AA Matrix.....: WATER
 Date Sampled....: 10/19/09 16:00 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #....: 9321493 Analysis Time...: 06:29
 Dilution Factor: 10

Method.....: DEN -LC-0012

PARAMETER	REPORTING			
	RESULT	LIMIT	UNITS	MDL
Perfluorooctanoic Acid	2.2	0.20	ug/L	0.098
Perfluorooctanesulfonate	2.5	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	0.46	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	1.4	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	1.1	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	0.85	0.20	ug/L	0.13
Perfluorononanoic acid (PFNA)	0.22	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	0.10 J	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUn A)	ND	0.20	ug/L	0.069
Perfluorododecanoic acid (PFDo A)	ND	0.20	ug/L	0.15
Perfluorotridecanoic acid (PFT ria)	ND	0.20	ug/L	0.18
Perfluorobutane sulfonate (PFB S)	2.5	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFH xs)	0.48	0.30	ug/L	0.070

SURROGATE	PERCENT		RECOVERY	
	RECOVERY	LIMITS		
13C4 PFOA	84	(50 - 200)		
13C4 PFOS	76	(50 - 200)		
13C4 PFBA	95	(50 - 200)		
13C2 PFHxA	83	(50 - 200)		
18O2 PFHxS	82	(50 - 200)		
13C5 PFNA	79	(50 - 200)		
13C2 PFDA	76	(50 - 200)		
13C2 PFUnA	75	(50 - 200)		
13C2 PFDoA	77	(50 - 200)		

NOTE(S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: MW 24-D1

HPLC

Lot-Sample #....: D9J230362-002 Work Order #....: LM7903AA Matrix.....: WATER
Date Sampled....: 10/19/09 16:00 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 02:57
Dilution Factor: 10

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.20	ug/L	0.15

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C2 PFUnA	101	(50 - 200)	

Dalton Utilities

Client Sample ID: MW 9-M3

HPLC

Lot-Sample #....: D9J230362-003 Work Order #....: LM7921AA Matrix.....: WATER
 Date Sampled....: 10/20/09 08:52 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/09/09
 Prep Batch #....: 9299508 Analysis Time...: 04:19
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.053	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.076	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.048	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
		(50 - 200)	(50 - 200)
13C4 PFOA	97	(50 - 200)	(50 - 200)
13C4 PFOS	51	(50 - 200)	(50 - 200)
13C4 PFBA	76	(50 - 200)	(50 - 200)
13C2 PFHxA	115	(50 - 200)	(50 - 200)
18O2 PFHxS	91	(50 - 200)	(50 - 200)
13C5 PFNA	77	(50 - 200)	(50 - 200)
13C2 PFDA	49 *	(50 - 200)	(50 - 200)
13C2 PFUnA	34 *	(50 - 200)	(50 - 200)
13C2 PFDoA	42 *	(50 - 200)	(50 - 200)

NOTE (S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: MW 9-M3

HPLC

Lot-Sample #....: D9J230362-003 Work Order #....: LM7921AC Matrix.....: WATER
Date Sampled...: 10/20/09 08:52 Date Received...: 10/23/09
Prep Date.....: 10/27/09 Analysis Date...: 11/06/09
Prep Batch #....: 9300254 Analysis Time...: 21:22
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057
<hr/>				
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
MeFOSA	38 *	(50 - 200)		

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: MW 9-M3

HPLC

Lot-Sample #...: D9J230362-003 Work Order #...: LM7922AA Matrix.....: WATER
 Date Sampled...: 10/20/09 08:52 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #...: 9321493 Analysis Time...: 06:44
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.042	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.12	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.041	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorobutane sulfonate (PFB)	ND	0.020	ug/L	0.0082
S)				
Perfluorohexane sulfonate (PFHxxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT	RECOVERY	LIMITS
	RECOVERY		
13C4 PFOA	81	(50 - 200)	
13C4 PFOS	51	(50 - 200)	
13C4 PFBA	97	(50 - 200)	
13C2 PFHxA	87	(50 - 200)	
18O2 PFHxS	77	(50 - 200)	
13C5 PFNA	66	(50 - 200)	
13C2 PFDA	45 *	(50 - 200)	
13C2 PFUnA	40 *	(50 - 200)	
13C2 PFDoA	42 *	(50 - 200)	

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: MW 9-M3

HPLC

Lot-Sample #....: D9J230362-003 Work Order #....: LM7923AA Matrix.....: WATER
Date Sampled...: 10/20/09 08:52 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 03:12
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C2 PFUnA	53	(50 - 200)	

Dalton Utilities

Client Sample ID: R1 BROWNS BRIDGE

HPLC

Lot-Sample #....: D9J230362-004 Work Order #....: LM7931AA Matrix.....: WATER
 Date Sampled....: 10/22/09 09:52 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/09/09
 Prep Batch #....: 9299508 Analysis Time...: 04:30
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT ria)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB S)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xS)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	98	(50 - 200)
13C4 PFOS	62	(50 - 200)
13C4 PFBA	78	(50 - 200)
13C2 PFHxA	116	(50 - 200)
18O2 PFHxS	89	(50 - 200)
13C5 PFNA	48 *	(50 - 200)
13C2 PFDA	60	(50 - 200)
13C2 PFUnA	44 *	(50 - 200)
13C2 PFDoA	39 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: R1 BROWNS BRIDGE

HPLC

Lot-Sample #....: D9J230362-004 Work Order #....: LM7931AC Matrix.....: WATER
Date Sampled....: 10/22/09 09:52 Date Received...: 10/23/09
Prep Date.....: 10/28/09 Analysis Date...: 11/07/09
Prep Batch #....: 9301197 Analysis Time...: 01:25
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
		(50 - 200)	
MeFOSA	58	(50 - 200)	

Dalton Utilities

Client Sample ID: R1 BROWNS BRIDGE

HPLC

Lot-Sample #....: D9J230362-004 **Work Order #....:** LM7932AA **Matrix.....:** WATER
Date Sampled....: 10/22/09 09:52 **Date Received...:** 10/23/09
Prep Date.....: 11/17/09 **Analysis Date...:** 12/22/09
Prep Batch #....: 9321493 **Analysis Time...:** 06:59
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.0032 J	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDa A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT riA)	ND	0.020	ug/L	0.018
Perfluorobutane sulfonate (PFB S)	0.0085 J	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xs)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	77	(50 - 200)
13C4 PFOS	55	(50 - 200)
13C4 PFBA	96	(50 - 200)
13C2 PFHxA	84	(50 - 200)
18O2 PFHxS	79	(50 - 200)
13C5 PFNA	67	(50 - 200)
13C2 PFDA	47 *	(50 - 200)
13C2 PFUnA	38 *	(50 - 200)
13C2 PFDaA	38 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R1 BROWNS BRIDGE

HPLC

Lot-Sample #....: D9J230362-004 Work Order #....: LM7933AA Matrix.....: WATER
Date Sampled....: 10/22/09 09:52 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 03:27
Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C2 PFUnA	50	(50 - 200)

Dalton Utilities

Client Sample ID: R2 TILTON BRIDGE

HPLC

Lot-Sample #....: D9J230362-005 Work Order #....: LM7971AA Matrix.....: WATER
 Date Sampled....: 10/22/09 09:03 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/09/09
 Prep Batch #....: 9299508 Analysis Time...: 04:41
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.15	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.39	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.066	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.12	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.11	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	0.073	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	0.031	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	0.0082 J	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFB)	0.26	0.020	ug/L	0.0082
S)				
Perfluorohexane sulfonate (PFHxS)	0.032	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	98	(50 - 200)
13C4 PFOS	63	(50 - 200)
13C4 PFBA	77	(50 - 200)
13C2 PFHxA	93	(50 - 200)
18O2 PFHxS	89	(50 - 200)
13C5 PFNA	83	(50 - 200)
13C2 PFDA	61	(50 - 200)
13C2 PFUnA	52	(50 - 200)
13C2 PFDoA	49 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R2 TILTON BRIDGE

HPLC

Lot-Sample #....: D9J230362-005 Work Order #....: LM7971AC Matrix.....: WATER
Date Sampled....: 10/22/09 09:03 Date Received...: 10/23/09
Prep Date.....: 10/28/09 Analysis Date...: 11/07/09
Prep Batch #....: 9301197 Analysis Time...: 01:30
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.043 J	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
MeFOSA	58	(50 - 200)	

NOTE(S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R2 TILTON BRIDGE

HPLC

Lot-Sample #....: D9J230362-005 Work Order #....: LM7972AA Matrix.....: WATER
 Date Sampled....: 10/22/09 09:03 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #....: 9321493 Analysis Time...: 07:29
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.17	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.33	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	0.057	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.15	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.091	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	0.055	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	0.027	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	0.032	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUn A)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDo A)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFT ria)	ND	0.020	ug/L	0.018
Perfluorobutane sulfonate (PFB S)	0.28	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFH xs)	0.029 J	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	105	(50	- 200)
13C4 PFOS	71	(50	- 200)
13C4 PFBA	120	(50	- 200)
13C2 PFHxA	108	(50	- 200)
18O2 PFHxS	96	(50	- 200)
13C5 PFNA	88	(50	- 200)
13C2 PFDA	64	(50	- 200)
13C2 PFUnA	53	(50	- 200)
13C2 PFDoA	50	(50	- 200)

NOTE(S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R2 TILTON BRIDGE

HPLC

Lot-Sample #....: D9J230362-005 Work Order #....: LM7972AC Matrix.....: WATER
Date Sampled....: 10/22/09 09:03 Date Received...: 10/23/09
Prep Date.....: 11/12/09 Analysis Date...: 12/01/09
Prep Batch #....: 9316449 Analysis Time...: 14:25
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING	LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.037 J		0.050	ug/L	0.0057

SURROGATE	PERCENT	RECOVERY	LIMITS
MeFOSA	RECOVERY	51	(50 - 200)

NOTE (S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R2 TILTON BRIDGE

HPLC

Lot-Sample #....: D9J230362-005 Work Order #....: LM7973AA Matrix.....: WATER
Date Sampled....: 10/22/09 09:03 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 03:42
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	(50 - 200)
13C2 PFUnA	53		

Dalton Utilities

Client Sample ID: R3 FOX BRIDGE

HPLC

Lot-Sample #....: D9J230362-006 Work Order #....: LM7991AA Matrix.....: WATER
 Date Sampled....: 10/22/09 09:35 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/12/09
 Prep Batch #....: 9299508 Analysis Time...: 05:45
 Dilution Factor: 1

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	0.022	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.024	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.022 J	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.022	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBs)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxs)	ND	0.030	ug/L	0.0070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
		(50 - 200)	(50 - 200)
13C4 PFOA	102		
13C4 PFOS	66		
13C4 PFBA	79		
13C2 PFHxA	116		
18O2 PFHxS	93		
13C5 PFNA	85		
13C2 PFDA	66		
13C2 PFUnA	43 *		
13C2 PFDoA	47 *		

NOTE(S) :

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R3 FOX BRIDGE

HPLC

Lot-Sample #....: D9J230362-006 Work Order #....: LM7991AC Matrix.....: WATER
Date Sampled....: 10/22/09 09:35 Date Received...: 10/23/09
Prep Date.....: 10/28/09 Analysis Date...: 11/07/09
Prep Batch #....: 9301197 Analysis Time...: 01:36
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
MeFOSA	58	(50 - 200)	

Dalton Utilities

Client Sample ID: R3 FOX BRIDGE

HPLC

Lot-Sample #....: D9J230362-006 Work Order #....: LM7992AA Matrix.....: WATER
 Date Sampled....: 10/22/09 09:35 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #....: 9321493 Analysis Time..: 07:44
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.028	0.020	ug/L	0.0098
Perfluorooctanesulfonate	0.018 J	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	0.033	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	0.021	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorobutane sulfonate (PFBs)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxs)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	91	(50 - 200)
13C4 PFOS	70	(50 - 200)
13C4 PFBA	112	(50 - 200)
13C2 PFHxA	97	(50 - 200)
18O2 PFHxS	91	(50 - 200)
13C5 PFNA	89	(50 - 200)
13C2 PFDA	58	(50 - 200)
13C2 PFUnA	40 *	(50 - 200)
13C2 PFDoA	37 *	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R3 FOX BRIDGE

HPLC

Lot-Sample #....: D9J230362-006 Work Order #....: LM7993AA Matrix.....: WATER
Date Sampled....: 10/22/09 09:35 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 03:57
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.020	ug/L	0.015

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C2 PFUnA	42 *	(50 - 200)	

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: R4 CONFLUENT

HPLC

Lot-Sample #....: D9J230362-007 Work Order #....: LM8AE1AA Matrix.....: WATER
 Date Sampled....: 10/22/09 10:44 Date Received...: 10/23/09
 Prep Date.....: 10/26/09 Analysis Date...: 11/12/09
 Prep Batch #....: 9299508 Analysis Time...: 05:56
 Dilution Factor: 10

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	0.36	0.20	ug/L	0.098
Perfluorooctanesulfonate	0.73	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	0.13 J	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	0.30	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	0.19 J	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	ND	0.20	ug/L	0.13
)				
Perfluorononanoic acid (PFNA)	ND	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	ND	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUnA)	ND	0.20	ug/L	0.069
Perfluorododecanoic acid (PFDoA)	ND	0.20	ug/L	0.15
Perfluorotridecanoic acid (PFTriA)	ND	0.20	ug/L	0.18
Perfluorotetradecanoic acid (PFTeA)	ND	0.20	ug/L	0.15
Perfluorobutane sulfonate (PFS)	0.72	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFHxsS)	ND	0.30	ug/L	0.070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	98	(50	- 200)
13C4 PFOS	98	(50	- 200)
13C4 PFBA	91	(50	- 200)
13C2 PFHxA	98	(50	- 200)
18O2 PFHxS	105	(50	- 200)
13C5 PFNA	104	(50	- 200)
13C2 PFDA	75	(50	- 200)
13C2 PFUnA	92	(50	- 200)
13C2 PFDoA	95	(50	- 200)

NOTE(S) :

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: R4 CONFLUENT

HPLC

Lot-Sample #....: D9J230362-007 Work Order #....: LM8AE1AC Matrix.....: WATER
Date Sampled....: 10/22/09 10:44 Date Received..: 10/23/09
Prep Date.....: 10/28/09 Analysis Date...: 11/07/09
Prep Batch #....: 9301197 Analysis Time..: 01:41
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.092	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	53	(50 - 200)

Dalton Utilities

Client Sample ID: R4 CONFLUENT

HPLC

Lot-Sample #....: D9J230362-007 Work Order #....: LM8AE2AA Matrix.....: WATER
 Date Sampled....: 10/22/09 10:44 Date Received...: 10/23/09
 Prep Date.....: 11/17/09 Analysis Date...: 12/22/09
 Prep Batch #....: 9321493 Analysis Time...: 07:59
 Dilution Factor: 10

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanoic Acid	ND	0.20	ug/L	0.098
Perfluorooctanesulfonate	ND	0.20	ug/L	0.13
Perfluorobutanoic acid (PFBA)	ND	0.20	ug/L	0.098
Perfluoropentanoic acid (PFPA)	ND	0.30	ug/L	0.11
Perfluorohexanoic acid (PFHxA)	ND	0.20	ug/L	0.029
Perfluoroheptanoic acid (PFHpA)	ND	0.20	ug/L	0.13
Perfluorononanoic acid (PFNA)	ND	0.20	ug/L	0.17
Perfluorodecanoic acid (PFDA)	ND	0.20	ug/L	0.078
Perfluoroundecanoic acid (PFUn A)	ND	0.20	ug/L	0.069
Perfluorododecanoic acid (PFDo A)	ND	0.20	ug/L	0.15
Perfluorotridecanoic acid (PFT riA)	ND	0.20	ug/L	0.18
Perfluorobutane sulfonate (PFB S)	ND	0.20	ug/L	0.082
Perfluorohexane sulfonate (PFH xs)	ND	0.30	ug/L	0.070

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	85	(50 - 200)
13C4 PFOS	84	(50 - 200)
13C4 PFBA	98	(50 - 200)
13C2 PFHxA	87	(50 - 200)
18O2 PFHxS	86	(50 - 200)
13C5 PFNA	86	(50 - 200)
13C2 PFDA	82	(50 - 200)
13C2 PFUnA	79	(50 - 200)
13C2 PFDoA	83	(50 - 200)

Dalton Utilities

Client Sample ID: R4 CONFLUENT

HPLC

Lot-Sample #....: D9J230362-007 Work Order #....: LM8AE2AC Matrix.....: WATER
Date Sampled....: 10/22/09 10:44 Date Received...: 10/23/09
Prep Date.....: 11/12/09 Analysis Date...: 12/01/09
Prep Batch #....: 9316449 Analysis Time...: 14:30
Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	0.077	0.050	ug/L	0.0057
SURROGATE	PERCENT	RECOVERY		
MePOSA	RECOVERY	LIMITS		
	55	(50 - 200)		

Dalton Utilities

Client Sample ID: R4 CONFLUENT

HPLC

Lot-Sample #....: D9J230362-007 Work Order #....: LM8AE3AA
Date Sampled....: 10/22/09 10:44 Date Received...: 10/23/09
Prep Date.....: 11/17/09 Analysis Date...: 12/24/09
Prep Batch #....: 9321493 Analysis Time...: 04:12
Dilution Factor: 10

Matrix.....: WATER

Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
	ND	LIMIT	UNITS	MDL
Perfluorotetradecanoic acid (P FTeA)	ND	0.20	ug/L	0.15

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	RECOVERY LIMITS
13C2 PFUnA	100	(50 - 200)